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ABSTRACT

Although the personality correlates of heroin addiction, LSD use, and marijuana smoking have been frequently investigated, relatively few data are available to describe the personality or lifestyle variables correlated with the pattern of polydrug abuse. In an attempt to gather such information, 17 polydrug users, selected from a group of 224 young adult, male, hospitalized veterans were matched for socioeconomic class and age with 17 controls who reported no experience with drugs of any kind. Comparison of the two groups on several personality measures showed significant differences on indices of neuroticism, sensation-seeking, and state anxiety. On the basis of personality characteristics, veterans could be classified into drug usage categories with 97.05 percent accuracy. (Author)

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PERSONALITY CORRELATES OF POLYDRUG ABUSE[1]

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Although heroin addiction is by far the most visible and frightening aspect of substance abuse to the general public, abuse of CNS stimulants, CNS depressants, hallucinogenic drugs, and opiates in combination is perhaps more frequent, and in many cases produces more severe problems. In fact, the pattern of polydrug abuse appears to be occurring with increasing frequency (Mutalipassi, Schwartz, Bender, & Skenazy, 1972). Polydrug abuse is characterized by ingestion of chemicals from a variety of psychopharmacological categories based largely on the availability of a drug at any given time. Thus, a polydrug abuser has often used CNS stimulants, CNS depressants, hallucinogens, opiates, cocaine, and/or other drugs. He usually, unlike the traditional heroin addict, shows no particular preferences but instead attempts to alter his state of consciousness with almost any available drug.

Investigations seeking personality correlates of drug dependence have been many, but examination of a recent review of investigations of the psychosocial correlates of deviant drug use in adolescence (Braucht, Brakarsh, Follingstad, & Berry, 1973) indicates that the majority of such studies have not been particularly interested in the polydrug abuser. Heroin addicts, LSD users, and marijuana smokers have received far greater attention, and the most popular instrument for measuring personality in these studies has been the MMPI. If other personality indices were used, these instruments often measured idiosyncratic personality variables of rather limited theoretical or practical interest.

One exception is a recent investigation of the drug-taking behavior of college students who differed on the personality variable of sensation

seeking (Zuckerman, Bone, Neary, Mangelsdorff, & Brustman, 1972). The variable of sensation seeking reflects the extent to which a person requires varied, novel, and complex sensations and experiences to maintain an optimal level of arousal (Zuckerman et al, 1972). In this study, significant correlations were found between the number of different drugs taken by each student and general sensation seeking (r = .42 for males; r = .36 for females). As is the case with many other studies, the use of college students may limit the extent to which findings can be generalized to other populations.

There appear to be no studies which have carefully defined a pattern of drug abuse characterizing the polydrug abuser and compared the polydrug abuser with control subjects on a battery of objective measures reflecting a wide variety of personality states and traits. Such is the purpose of the present investigation. A second purpose of the study is to determine the extent to which subjects can be classified into polydrug usage patterns on the basis of personality characteristics. A final goal is to investigate these variables in a population composed of a more heterogenous group than college students and/or hospitalized psychiatric patients.

Method

Subjects (Ss) were 17 polydrug users and 17 controls selected from a group of 224 male hospitalized veterans 35 years old and younger who had been administered a detailed structured interview concerning personal substance abuse patterns and a battery of objective personality tests. Each S was informed that his participation was voluntary and that his answers would be strictly confidential. A research technician who had

no affiliation with medical, surgical, psychiatric, or substance abuse wards from which Ss were drawn conducted interviews and administered all tests. Less than one percent of persons contacted declined to participate.

Drug information protocols of all Ss were evaluated, and polydrug abusers ($n = 17$) were selected in the following manner. Drugs were classified into one of six categories: a) CNS stimulants, b) CNS depressants, c) Cocaine, d) Opiate narcotics, e) Hallucinogenics and f) Darvon and other drugs. Ss were classified as polydrug abusers if they had used at least one drug from 3 or more of these categories in excess of 10 times since discharge from service. Seven Ss had used drugs from 3 categories; 6 used drugs from 4 categories; and 2 each used drugs from 5 and 6 categories. Control Ss ($n = 17$), selected because they reported no experience with drugs of any kind, were matched with polydrug abusers on the variables of socioeconomic class and age.

The battery of personality measures included the following tests: 1) The Rokeach Dogmatism Scale (1960), 2) The Barron Ego Strength Scale (1953), 3) The Eysenck Personality Inventory (EPI; 1968), 4) The Wolpe-Lange Fear Survey Schedule (FSS; 1964), 5) The Rotter Locus of Control Scale (1966), 6) The Zuckerman Sensation Seeking Scale (SSS; 1972) and 7) The Spielberger State-Trait Anxiety Inventory (1970).

Results

To compare polydrug abusers with non-users, Ss were classified into drug use categories by a stepwise discriminant function analysis on the basis of the personality variable scores. Inspection of mean personality variable scores of the two groups presented in Table 1 reveals several significant differences between groups. Polydrug abusers showed

significantly higher scores on the Neurotocism scale of the EPI ($F = 4.87$, $p < .05$) and significantly lower scores on the EPI Lie scale ($F = 23.97$, $p < .01$). Polydrug abusers also scored significantly higher on the total SSS ($F = 23.57$, $p < .01$) and were higher as well on the SSS subscales of Disinhibition ($F = 25.95$, $p < .01$), Experience seeking ($F = 30.23$, $p < .01$), Thrill and adventure seeking ($F = 4.86$, $p < .01$) and, General sensation seeking ($F = 11.56$, $p < .01$). The state anxiety scores of polydrug abusers were also significantly higher than those of nonusers ($F = 8.18$, $p < .01$). Scores of the two groups on Dogmatism, Ego strength, Extraversion, Fear Survey Schedule, Locus of Control, Boredom susceptibility, and trait anxiety failed to achieve statistical significance.

In that a recent study by Berzins and Ross (1973) reported differences between heroin addicts and college student nonaddicts on a subscale of Rotter's Locus of Control scale, subscales of Personal Control and Sociopolitical Control were scored for comparison. There were, however no significant differences between polydrug or nonusers groups on either measure. These two subscales were not used in the discriminant function analysis.

Discriminant function analysis performed on the aforementioned personality variables correctly classified 97.05% of Ss into appropriate drug usage groups. Only 5.89% of nonusers ($n = 1$) were incorrectly classified as belonging to the polydrug group, while 100% of Ss were correctly classified as belonging to the polydrug group.

Discussion

There were several striking personality differences between the polydrug abusers and controls. Polydrug abusers were more neurotic on

the EPI reflecting heightened emotional lability and overreactivity. While there was no difference between abusers and controls in trait anxiety, or anxiety proneness, there was a significant difference in state anxiety. Inspection of the means of the two groups presented in Table 1 reveals that polydrug users, while generally no more anxious, responded to the stress of hospitalization with greater elevations of state anxiety than their nonuser counterparts. These data tend to reinforce the neurotocism findings in suggesting that polydrug users are emotionally overresponsive to stressful stimuli. While the difference in extraversion between the two groups was not significant, the neurotocism and extraversion scores considered together and compared with Eysenck's norms (1968) categorize the polydrug users as high on both neurotocism and extraversion, which Eysenck reports to be characteristic of under-socialized psychopaths. The significantly lower Lie scores of the abusers probably reflects an increased willingness to disclose candid information. In fact, relatively low scores of both groups on this measure suggests that Ss probably responded truthfully when questioned about drug usage.

Perhaps the most important differences between users and nonusers were on the sensation seeking variables. According to the Zuckerman, et al (1972) interpretation of the sensation seeking subscales, polydrug users exhibit a greater need to engage in activities involving danger, to experience a broad variety of inner experience, to live a hedonistic life characterized by excitement, sexual variety, etc., and to seek out situations which will raise arousal to more optimal levels. Previous findings (Zuckerman et al, 1972) of increased drug usage among Ss high in sensation seeking were confirmed and extended by the present investigation.

Several of the personality variables, including ego strength, dogmatism, fearfulness, and locus of control, did not differentiate between users and nonusers. The failure of locus of control to do so was particularly puzzling in view of Berzin and Ross' (1973) findings. Perhaps locus of control plays a different role for heroin addicts than polydrug users.

Ss were classified into drug usage groups on the basis of personality characteristics with a high degree of accuracy. This finding should be cross validated on another sample. While it would be interesting to speculate regarding possible personality characteristics which predispose one to polydrug abuse, parsimony requires the conclusion that there are distinct personality correlates of polydrug abuse. The effective use of objective personality measures to identify polydrug abusers appears to have been well demonstrated.

Finally, it should be observed that the relationships of polydrug abuse and personality may differ in other populations. One strength of the present investigation is that the population studied, unlike populations of college students, hospitalized psychiatric patients, or incarcerated prisoners often used in other studies, included medical and surgical as well as psychiatric patients. Because of this subject selection, our findings may be generalized to most male veterans 35 years old and younger and perhaps to the population of young males in general.

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Footnote

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TABLE 1

Mean Personality Variable Scores of Polydrug and Non-User Groups

Personality Variable	Polydrug Group	Non-User Group	F
Dogmatism	165.94	160.06	0.34
Ego Strength	35.53	38.88	1.10
EPI - Extraversion	14.53	12.29	3.70
Neurotocism	15.29	10.65	4.87*
Lie	1.29	3.47	23.97**
F SS III - Total	147.12	138.71	0.34
Animal	12.29	13.71	1.01
Tissue Damage	37.53	37.00	0.01
Classical	25.47	24.94	0.05
Social-Interpersonal	39.24	33.00	2.38
Miscellaneous	24.41	22.18	0.69
Failure	44.00	35.12	3.49
Locus of Control - Total	10.18	9.35	0.31
Personal Control	2.35	1.76	1.06
Sociopolitical Control	3.59	3.00	0.92
Sensation Seeking - Total	53.59	35.24	23.57**
Boredom Susceptibility	8.00	6.12	3.99
Disinhibition	9.18	5.29	25.95**
Experience Seeking	12.29	6.12	30.23**
Thrill & Adventure Seeking	10.65	8.06	4.86*
General	13.47	9.65	11.56**
State Anxiety	54.00	42.88	8.18**
Trait Anxiety	48.71	42.47	1.34

* $p < .05$

** $p < .01$